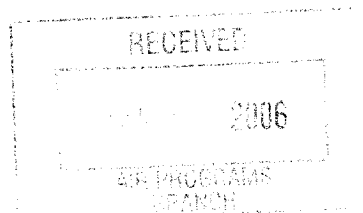




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

JAN 27 2006

OFFICE OF
 AIR QUALITY PLANNING
 AND STANDARDS



Beth Brock
 Team Leader
 Eli Lilly and Company
 Tippecanoe Laboratories
 1650 Lilly Road
 Lafayette, IN 47909

Dear Ms. Brock:

I am writing in response to your request for alternative monitoring described in detail in your Alternative Monitoring Petition (AMP) dated December 2, 2005, which requests alternatives to monitoring for Eli Lilly and Company's (Lilly) rotary kiln, solid-liquid incineration system, also known as the T-149 incinerator, that burns hazardous and non-hazardous waste. The T-149 incinerator is subject to the National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors (HWC MACT) rule under 40 CFR 63, Subpart EEE and the General Provisions under 40 CFR 63, Subpart A. The T-149 incinerator is located at the Lilly Tippecanoe Laboratories in Lafayette, Indiana.

The HWC MACT rule requires that Lilly monitor certain operating parameters continuously, but not the actual pollutants [metals, particulate matter (PM), and hydrogen chloride and chlorine (HCl/Cl₂)]. However, Section 63.1209(a)(5) of the HWC MACT allows facilities to petition the Administrator under Section 63.8(f) of the General Provisions to use continuous emissions monitoring systems (CEMS) for compliance monitoring of particulate matter, mercury, semi-volatile metals, low volatile metals, and hydrochloric acid/chlorine gas emissions in lieu of complying with corresponding operating parameter limits. In addition, Section 63.1209(g) of the HWC MACT allows facilities to submit an application to the Administrator to request approval of alternative monitoring requirements to demonstrate compliance with operating parameter limits monitored by parametric instruments.

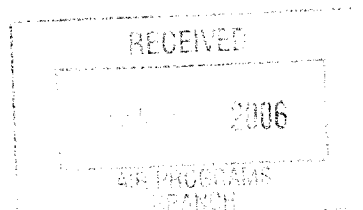
You are proposing to install and operate CEMS for metals, PM, and HCl to directly demonstrate continuous compliance with the semi-volatile metals, low-volatile metals, mercury, particulate matter, and HCl/Cl₂ emission limits as an alternative to monitoring operating parameter limits that are shown in the attached table. As required by the HWC MACT, you are also proposing to install and operate CO and O₂ CEMS to demonstrate compliance with the CO emission limit, corrected to 7 percent oxygen.



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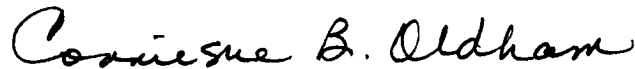
The HWC MACT rule requires that Lilly monitor certain operating parameters continuously, but not the actual pollutants [metals, particulate matter (PM), and hydrogen chloride and chlorine (HCl/Cl₂)]. However, Section 63.1209(a)(5) of the HWC MACT allows facilities to petition the Administrator under Section 63.8(f) of the General Provisions to use continuous emissions monitoring systems (CEMS) for compliance monitoring of particulate matter, mercury, semi-volatile metals, low volatile metals, and hydrochloric acid/chlorine gas emissions in lieu of complying with corresponding operating parameter limits. In addition, Section 63.1209(g) of the HWC MACT allows facilities to submit an application to the Administrator to request approval of alternative monitoring requirements to demonstrate compliance with operating parameter limits monitored by parametric instruments.

You are proposing to install and operate CEMS for metals, PM, and HCl to directly demonstrate continuous compliance with the semi-volatile metals, low-volatile metals, mercury, particulate matter, and HCl/Cl₂ emission limits as an alternative to monitoring operating parameter limits that are shown in the attached table. As required by the HWC MACT, you are also proposing to install and operate CO and O₂ CEMS to demonstrate compliance with the CO emission limit, corrected to 7 percent oxygen.

Pursuant to Section 60.8(f) of the General Provisions of 40 CFR 63 and 40 CFR 63.1209(a)(5) of the HWC MACT, the U.S. Environmental Protection Agency hereby approves your request for the alternative monitoring approach, associated QA/QC procedures, and the backup monitoring conditions as described in detail in your December 2, 2005 AMP and its associated appendices. The approved alternative monitoring modes and averaging periods are summarized in the enclosed table. This approval is only applicable to the Lilly facility cited above.

If you have further questions on this matter, please contact Dan Bivins at (919) 541-5244.

Sincerely,



Conniesue B. Oldham, Ph.D., Group Leader
Air Measurements & Quality Group

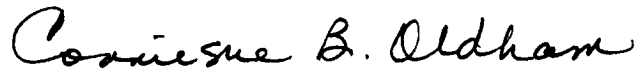
Enclosure

cc: Steve Friend, Indiana Department of Environmental Management
Brent Marable, Region 5
Sarah Marshall, Region 5
Beth Valenziano, Region 5
Ethan Chatfield, Region 5
Pamela Blakley, Region 5
Sam Portanova, Region 5
Bob Holloway, EPA, OSW
Tom Driscoll, EPA, OAQPS
Barrett Parker, EPA, OAQPS
Peter Tsirigotis, EPA, OAQPS

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Conniesue B. Oldham, Ph.D., Group Leader
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TABLE 1. ROTARY KILN INCINERATOR EXPECTED HWC MACT OPERATING AND EMISSION LIMITS

HWC MACT LIMIT	HOW ESTABLISHED AND MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC MODE
LIMITS ASSOCIATED WITH THE COMBUSTION UNIT				
Minimum combustion chamber temperature 63.1209 (j,k)	Average of test run averages	Hourly rolling average	YES	YES
Maximum combustion chamber pressure	No operating limit established. The kiln uses pressurized seals and the rest of the system is sealed.	NA	NO	NO
Maximum flue gas flow rate or production rate ^a 63.1209 (j) (2)	Average of the maximum hourly rolling averages	Hourly rolling average	YES	YES
Operation of waste firing system 63.1209 (j)	Minimum waste atomization media pressure	Hourly rolling average	YES	YES
Carbon monoxide emission rate 63.1209 (a)	HWC MACT	Hourly rolling average	YES	YES
LIMITS ASSOCIATED WITH WASTE FEED				
Maximum solid waste feed 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum rotary kiln primary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum rotary kiln secondary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum SCC primary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum SCC secondary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
LIMITS ASSOCIATED WITH PARTICULATE MATTER EMISSIONS 63.1203(b), 63.1219(a)				
Particulate Emission Limit	CMS Performance Evaluation Test Plan/Alternative Monitoring Petition	6-hour rolling average from block hour average	YES	NO

TABLE 1. ROTARY KILN INCINERATOR EXPECTED HWC MACT OPERATING AND EMISSION LIMITS

HWC MACT LIMIT	HOW ESTABLISHED AND MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC MODE
LIMITS ASSOCIATED WITH THE COMBUSTION UNIT				
Minimum combustion chamber temperature 63.1209 (j,k)	Average of test run averages	Hourly rolling average	YES	YES
Maximum combustion chamber pressure	No operating limit established. The kiln uses pressurized seals and the rest of the system is sealed.	NA	NO	NO
Maximum flue gas flow rate or production rate ^a 63.1209 (j) (2)	Average of the maximum hourly rolling averages	Hourly rolling average	YES	YES
Operation of waste firing system 63.1209 (j)	Minimum waste atomization media pressure	Hourly rolling average	YES	YES
Carbon monoxide emission rate 63.1209 (a)	HWC MACT	Hourly rolling average	YES	YES
LIMITS ASSOCIATED WITH WASTE FEED				
Maximum solid waste feed 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum rotary kiln primary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum rotary kiln secondary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum SCC primary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
Maximum SCC secondary waste feed rate 63.1209 (j)	Average of the maximum rolling hour averages	Hourly rolling average	YES	YES
LIMITS ASSOCIATED WITH PARTICULATE MATTER EMISSIONS 63.1203(b), 63.1219(a)				
Particulate Emission Limit	CMS Performance Evaluation Test Plan/Alternative Monitoring Petition	6-hour rolling average from block hour average	YES	NO

Maximum ash feed rate	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro-Sonics	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
H W C M A C T L I M I T	HOW ESTABLISHED AND MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC MODE
Maximum solids content of the condenser/absorber scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS. Hourly rolling average for minimum blowdown and either tank volume or level	NO	waived via Alternative Monitoring Petition request under 1209(g) of HWC MACT
Maximum solids content of the Hydro-Sonics scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS. Hourly rolling average for minimum blowdown and either tank volume or level	NO	YES- via CMS
Minimum liquid to gas ratio (L/G) or minimum liquid and maximum flue gas flow rates for the Hydro-Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES
LIMITS ASSOCIATED WITH HCl/Cl₂ EMISSIONS 63.1219(a)				
HCl/Cl ₂ emission rate	CMS Performance Evaluation Test Plan/Alternative Monitoring Petition	12-hour rolling average	YES	NO
Maximum feed rate of total chlorine and chloride	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro-Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
Minimum pressure drop across the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Minimum liquid feed pressure to the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Hydro-Sonics scrubber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Condenser/absorber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Minimum condenser/absorber water pH	Average of the test run averages	Hourly rolling average	NO	YES
Minimum Hydro-Sonics scrubber water pH	Average of the test run averages	Hourly rolling average	NO	YES
LIMITS ASSOCIATED WITH METALS EMISSIONS 63.1203(b), 63.1219(a)				
Mercury emission rate	CMS Performance Evaluation Test Plan/Alternative Monitoring	12-hour rolling average from block hour average	YES	NO

Maximum ash feed rate	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro-Sonics	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
H W C M A C T L I M I T	HOW ESTABLISHED AND MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC MODE
Maximum solids content of the condenser/absorber scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS. Hourly rolling average for minimum blowdown and either tank volume or level	NO	waived via Alternative Monitoring Petition request under 1209(g) of HWC MACT
Maximum solids content of the Hydro-Sonics scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS. Hourly rolling average for minimum blowdown and either tank volume or level	NO	YES- via CMS
Minimum liquid to gas ratio (L/G) or minimum liquid and maximum flue gas flow rates for the Hydro-Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES
LIMITS ASSOCIATED WITH HCl/Cl₂ EMISSIONS 63.1219(a)				
HCl/Cl ₂ emission rate	CMS Performance Evaluation Test Plan/Alternative Monitoring Petition	12-hour rolling average	YES	NO
Maximum feed rate of total chlorine and chloride	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro-Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
Minimum pressure drop across the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Minimum liquid feed pressure to the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Hydro-Sonics scrubber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Condenser/absorber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Minimum condenser/absorber water pH	Average of the test run averages	Hourly rolling average	NO	YES
Minimum Hydro-Sonics scrubber water pH	Average of the test run averages	Hourly rolling average	NO	YES
LIMITS ASSOCIATED WITH METALS EMISSIONS 63.1203(b), 63.1219(a)				
Mercury emission rate	CMS Performance Evaluation Test Plan/Alternative Monitoring	12-hour rolling average from block hour average	YES	NO

	Application			
SVM emission rate	CMS Performance Evaluation Test Plan Alternative Monitoring Application	12-hour rolling average from block hour average	YES	NO
LVM emission rate	CMS Performance Evaluation Test Plan Alternative Monitoring Application	12-hour rolling average from block hour average	YES	NO
Maximum feed rate of mercury	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
Maximum feed rate of SVM	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
H W C M A C T L I M I T	HOW ESTABLISHED and MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC
Maximum feed rate of LVM (pumpable and total feedrate)	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
Maximum total chlorine and chloride feed rate	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro -Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
Minimum pressure drop across the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Minimum liquid feed pressure to the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Maximum solids content of the condenser/absorber scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS, Hourly rolling average for minimum blowdown and either tank volume or level	NO	waived via Alternative Monitoring Petition request under 1209(g) of HWC MACT
Maximum solids content of the Hydro-Sonics scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS, Hourly rolling average for minimum blowdown and either tank volume or level	NO	YES- via CMS
Condenser/absorber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Hydro-Sonics scrubber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES

^a This limit is also an indicator of compliance with the SVM, LVM, PM, and HCl/Cl₂ emission limits. NA = Not Applicable CMS = Continuous Monitoring System

	Application			
SVM emission rate	CMS Performance Evaluation Test Plan Alternative Monitoring Application	12-hour rolling average from block hour average	YES	NO
LVM emission rate	CMS Performance Evaluation Test Plan Alternative Monitoring Application	12-hour rolling average from block hour average	YES	NO
Maximum feed rate of mercury	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
Maximum feed rate of SVM	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
H W C M A C T L I M I T	HOW ESTABLISHED and MEASURED	AVERAGING TIME	LIMIT MONITORED IN CEMS MODE	LIMIT MONITORED IN PARAMETRIC
Maximum feed rate of LVM (pumpable and total feedrate)	Average of the test averages – (may be extrapolated upward)	12-hour rolling average	NO	YES
Maximum total chlorine and chloride feed rate	Average of the test run averages	12-hour rolling average	NO	YES
Minimum pressure drop across the Hydro -Sonics scrubber	Average of the test run averages	Hourly rolling average	NO	YES-equivalent pressure drop
Minimum pressure drop across the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Minimum liquid feed pressure to the condenser/absorber	Manufacturer's specifications	Hourly rolling average	NO	YES
Maximum solids content of the condenser/absorber scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS, Hourly rolling average for minimum blowdown and either tank volume or level	NO	waived via Alternative Monitoring Petition request under 1209(g) of HWC MACT
Maximum solids content of the Hydro-Sonics scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	Average of the test run averages	12-Hour rolling average if measured by CMS, Hourly rolling average for minimum blowdown and either tank volume or level	NO	YES- via CMS
Condenser/absorber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES
Hydro-Sonics scrubber minimum Liquid to Gas Ratio (L/G) or minimum liquid & maximum flue gas flow rates	Average of the test run averages	Hourly rolling average	NO	YES

^a This limit is also an indicator of compliance with the SVM, LVM, PM, and HCl/Cl₂ emission limits. NA = Not Applicable CMS = Continuous Monitoring System